AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 3.

Attachment: Replacement sheet

REMARKS

Claims 1-21 are active.

The Office Action is responded to using corresponding paragraph numbers of the Action.

1. A new Fig. 3 is submitted.

2. It is respectfully submitted that the title is proper as it stands. The term "segment" is used throughout the Specification and the claims.

3. Regarding the objections to the specification:

(a) The sentences of the application having the expression "enable" have been rephrased more clearly as requested by the Examiner.

(b) The term "stabilization" at page 8, line 6, has been substituted for "stabilisation".

(c) Regarding how the converter according to the invention reduces the costs and allows serial production of converters, reference is made to page 9, lines 2-4 of the Specification. The Examiner should consider the following explanations:

The converter according to the present invention is provided between conductors of the same phase line. The converter is not connected between different phase lines. This in itself is a major difference between the invention and the prior art. Since the converter is not connected between phase lines, it does not have to support high voltages and, consequently, it is much smaller than the converters of the prior art, which are large and sometimes require a whole building to contain them. The converter of the present invention is small compared with those of the prior art. In a practical embodiment, it can be mounted directly on line pylons. Also, it can be mass-produced, which means that it can be produced at low cost.

(d) The sentence at page 11, lines 7-10 of the Specification has been rephrased according to the Examiner's suggestion.

(e) The sentence at page 12, lines 1-3 of the Specification has been reformulated to address the Examiner's objection. The reference WO 02/41459 has been replaced by its U.S. equivalents, 6,396,172 and 6,727,604 (CIP) in compliance with 37 CFR 1.57(c).

(f) The sentence at page 12, line 25 has been reformulated in order to overcome the objection.

(g) The formal objections regarding expressions at page 12, lines 28 to page 13, line 1 have been overcome as suggested by the Examiner.

(h) The expression at page 13, line 8 of the Specification ("to do a power transfer") has also been reformulated in accordance with our understanding of the Examiner's rejection.

It is submitted that all of the objections to the Specification have been addressed. No new matter has been added.

4. Regarding the objections against claims 3-5, the term "switch" is in proper singular form. This signifies that there is one switch per power unit, as set forth in the Specification at page 13, lines 20-24:

> Referring now to Figure 4, the switch 26 of each power unit 15 or 16 is able to connect and disconnect, for the phrase line A of the corresponding segment 6 or 8, n-1 conductors . . . .

In Fig. 4, two power units 15 and 16 are shown each having a switch.

5. Regarding the objection against claims 3-7, 9, 10 and 12-20, the expression "power unit(s)" has been substituted for "power exchange unit(s)" as suggested by the Examiner.

6. Regarding the objection against claims 13-21, the expression "the

switch" in claim 13 has been substituted for "a switch". The expression "the switch" in claims 14-21 now has an antecedent in claim 13.

7.&8. Regarding the objections against claims 12-21, more particularly regarding the objections against insufficiency in the steps of claim 12, the claim has been amended to better describe the method. These amendments are supported by the Specification at pages 11 and 12 and Fig. 3:

- In step a), a power unit is provided. The power unit has a power converter having its first pair of terminals connected to at least one conductor of one of the phase lines. This is a very specific way (not shown in the prior art) of connecting the converter to a segment of the electric power line.
- In step b), the converter is controlled to modify said power flow. It should be noted that, first, the method is applied to a very specific electric power line (an electric power line having a segment tht has phase lines each having n conductors insulated from one another and short-circuited at ends of the segment). Second, the converter is connected in a very specific manner to the phase line (between the conductors of the same phase line, not between phase lines of the electric power line).

It is respectfully submitted amended claim 12 now recites the steps to complete the method in that, in step a), a power converter connected to the electric power line in a very specific manner is provided, and, in step b), the power converter is installed to modify the flow of power.

9.&10. Claims 1-21 are unpatentable over BJÖRKLUND (US 6,411,067) in view of GENRIKH (US 4,135,221). It is noted that the main independent claims 1 and 12 from which claims 2-11 and 13-21 respectively depend, have been amended to set forth that each phase line has n conductors which n is equal to or grater than 2. Thus, it is made clear that each phase line has a plurality of conductors.

BJÖRKLUND provides a device and method for controlling the flow of electric power in a transmission line. BJÖRKLUND's system concerns monoconductor phase lines. BJÖRKLUND's converter is connected between different phase lines. BJÖRKLUND's invention concerns conventional FACTs with connections between the phase lines and is applied to the whole transmission line, and not to a segment of the transmission line as in the present invention. These aspects are described at column 3 lines 35 to 51 and in FIG. 1 of BJÖRKLUND, which schematically illustrates a single line diagram. A transmission line for carrying alternating current and having one or several phases is denoted as 1. The device for controlling the flow of electric power in this transmission line 1 is denoted as 2. This device 2 is clearly connected between phase lines of the transmission line 1 and not in series with one of the n conductors of a single phase line as set forth in claims 1 and 12.

GENRIKH also concerns monoconductor phase lines. GENRIKH uses an external deicing source 10 connected to a phase line or a three-phase source 11, as is described at column 2, lines 55 and 60 of GENRIKH. The phase line as described by GENRIKH must be temporarily disconnected because it is grounded. See column 2, lines 44 to 48, and col. 3, lines 15 to 20. GENRIKH's system requires a supplemental conductor 9.

The Examiner's position is that BJÖRKLUND discloses an apparatus for modifying power in a segment of an electrical power line wherein each segment includes a phase line, each having n conductors electrically insulated from one another. This is not shown in BJÖRKLUND. In BJÖRKLUND, in Fig. 2, for example, there are three phase lines each having a single conductor (monoconductor phase lines). Since each phase line in BJÖRKLUND has a single conductor, there is no possibility of short-circuiting n, where n is equal to or greater than 2, conductors of the same phase line at ends of the segment, as is done in the present invention. The multiconductor aspect of the present invention must be noted. In GENRIKH, as shown in his Figs. 1-49, there only is a transmission line having three phase lines with each phase line having a single conductor. Therefore, GENRIKH

cannot be deemed to suggest or disclose the short-circuiting of n the conductors of the same phase line as set forth in claims 1 and 12.

The Examiner also mentions that BJÖRKLUND discloses an electric component 7 corresponding to the electric component 24 of the invention. In this regard, BJÖRKLUND only teaches a capacitance, while the electric component 24 according to the present application is selected among many types of electric components, such as a battery 30, an inductance 32, a resistance 34 and a resistance connected in parallel to a capacitor 36.

The Examiner also considers that BJÖRKLUND and GENRIKH are from the same field of endeavour, namely high voltage transmission line deicing systems. However, BJÖRKLUND does not mention the problem of deicing or heating phase lines and does not seem to intend to solve problems encountered with phase lines deicing. Therefore, while both patents show transmission lines, applicant respectfully submits that it is not obvious for a person skilled in the art to combine GENRIKH with BJÖRKLUND since there is no common thread connecting them.

The present invention, as set forth in claims 1 and 12, from which claims 2-11 and 13-21 respectively depend, claims "a segment of an electric power line, each having n conductors where n is equal to or greater than 2, insulated from one another and short-circuited at ends of the segment". This provides an apparatus and method for modifying a power flow in a segment of an electric power line. According to the present invention, the modifying of power flow within an electrical power line, such as, for example, for deicing the line can be done without disconnecting the phase lines. This is not possible with GENRIKH where at least one of the phase lines has to be disconnected from the transmission line.

The present invention, as claimed in claims 1-21, is not rendered obvious by BJÖRKLUND in view of GENRIKH.

As demonstrated above there is no basis to combine the references. Further, even if the combination is improperly made, it still does not meet the terms of the claims. Since claims 1-21 define novel and advantageous subject matter,, the claims should be allowed.

The amendment clearly places the application in condition for allowance.

Prompt and favourable action is requested.

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Respectfully submitted,

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